

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

**SUBJECT:** Toxicological Review of HW06 Data 12 March 2012  
Dimock, PA

**FROM:** Dawn A. Ioven, toxicologist  
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On 26 January 2012, U.S. EPA collected water samples from HW06 in Dimock. The samples were analyzed for over 200 constituents, including volatile organic compounds, semi-volatile compounds, metals and bacteria. The analytical results were then validated and compared to risk-based screening levels and/or standards for public drinking water supplies.

**Fluoride**

Fluoride was reported in HW06 at 630 ug/L; this concentration slightly exceeds the conservative risk-based screening level for this chemical (620 ug/L). The non-cancer threat associated with long-term exposure to the observed level of fluoride is negligible (Hazard Quotient = 1.0).

**Arsenic**

Arsenic was observed in HW06 at 7.6 ug/L in an unfiltered sample. While this concentration slightly exceeds the risk-based screening level for arsenic in tap water (4.5 ug/L), it is less than the enforceable drinking standard for public water supplies (10 ug/L).

**Chromium**

In HW06, chromium was detected in an unfiltered sample at 10.8 ug/L. (Chromium was not detected in the filtered sample from this location.) The risk-based screening level for the most toxic form of chromium (hexavalent) is 3.1 ug/L. The concentration observed in HW06 exceeds this value by approximately three-fold (yielding an excess cancer risk of approximately 3.9E-04). Note, however, that the form of chromium detected in this sample is not known. If the reported concentration represents the much less toxic trivalent form of chromium (with a risk-based screening level of 16,000 ug/L), then there is no risk associated with exposure.



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### **Lithium**

Lithium was reported in an unfiltered sample at 236 ug/L; the filtered sample for HW06 contained lithium at 228 ug/L. With a risk-based screening level of 31 ug/L under a long-term exposure scenario, there is a non-cancer threat associated with exposure (Hazard Quotient = 7.6). A risk of this magnitude triggers consideration of immediate action to mitigate the potential threat.

### **Sodium**

Samples collected from HW06 contained sodium at concentrations of 83,700 ug/L (unfiltered) and 83,300 ug/L (filtered). A quantitative assessment of risk cannot be performed for sodium; however, U.S. EPA has a non-enforceable Health Advisory of 20,000 ug/L for sodium in drinking water. This value is based on recommendations for individuals on sodium-restricted diets.



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